REMARKS/ARGUMENTS

Reconsideration and continued examination of the above-identified application are respectfully requested.

In the amended Figures 1-3, per the Examiner's request, the applicants have enlarged the size of the figures. The amendment to the claims further defines what the applicants regard as the invention. Full support for the amendment exists in the application as originally filed including, but not limited to, the claims as originally filed. No new questions of patentability should arise nor does the amendment necessitate any further searching on the part of the Examiner since the Examiner has essentially considered similar subject matter. The amendment places the application in condition for allowance. At a minimum, the amendment places the application in a better condition for appeal. Accordingly, no questions of new matter should arise and entry of the amendment is respectfully requested.

Claims 1-4, 7-16, and 18-30 are pending in the application. Claims 5, 6, and 17 have been canceled.

At page 2 of the Office Action, the Examiner rejects claim 28 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicants regard as the invention. According to the Examiner, one skilled in the art would be unable to determine how a given complex exhibits structural spectra as shown in Figs. 1, 2, 3, or combinations thereof, or how the figures can be combined.

The Examiner also reversed his earlier position, which required the applicants to set forth the figures in the claim itself. According to the Examiner, the applicants may simply reference the

figures in the claims.

The Examiner asserts that the figures as originally filed are too small to discern the testing parameters and numbers. The Examiner also asserts that one skilled in the art would not be able to determine, from the figures and disclosure set forth in the specification, whether a given silver glutamic chelate falls within the scope of the claims, or how the figures may be combined.

Additionally, the Examiner asserts that since the spectra are of an identical compound but involve different analysis techniques, the figures cannot be combined in part or in whole. Furthermore, the Examiner believes that the spectra exhibit an identical compound; thus, the compound necessarily exhibits all of the spectra depicted in Figures 1, 2, and 3. Therefore, the Examiner suggests that the limitation of claim 28 should be "Figures 1, 2, and 3" as opposed to "Figures 1, 2, or 3, or combinations thereof." For the following reasons, this rejection is respectfully traversed.

The figure numbers recited in claim 28 of the present application relate to Differential Scanning Calorimetry (DSC) spectrum, proton Nuclear Magnetic Resonance (NMR) spectrum, and carbon NMR spectrum. Each of these tests is a different analysis. The carbon and hydrogen NMRs are distinct because they provide different information about the structure of the same solid. In addition, the DSC is independent of both NMRs because it provides different information about the structure of the solid. Page 15 of the present application clearly describes the DSC and NMR analyses, which correspond to Figs. 1-3 of the present application. From page 15 of the present application, it is clear that Figs. 1-3 individually and/or collectively are the fingerprints of the product. Any one of these spectra can be used to describe the material. Given that carbon NMR,

hydrogen NMR, and DSC provide different information regarding the structure of a solid, one skilled in the art, by evaluating each of the spectra, individually or collectively, can identify the structure of the solid. Just as there are numerous U.S. patents issued which describe the same material by use of a number of alternative characteristics (e.g., BET, pH, or density), claim 28 is doing the same.

Additionally, per the Examiner's request, the applicants have enlarged the size of Figures 1, 2, and 3 to better assist the Examiner. Accordingly, the rejection under 35 U.S.C. §112, second paragraph, should be withdrawn.

At page 3 of the Office Action, the Examiner rejects claims 1-4, 7-16, and 18-30 under 35 U.S.C. §112, second paragraph, for failing to set forth the subject matter which the applicants regard as the invention. According to the Examiner, in the previous response to the Office Action, the applicants stated that the product of the claimed invention is in a solid state and that in an experiment when glutamic acid was added to a solution, a yellowish precipitate was formed. The Examiner states that the arguments set forth by the applicants, in the previous response to the Office Action, indicate that the claimed invention differs from what is recited in the claims because the claims do not require the product to be in a solid form, and in fact, the claims recite an aqueous solution. For the following reasons, this rejection is respectfully traversed.

Claims 1, 9, 13, 16, 21, 23, and 26 recite that the complex is a solid when present in an aqueous solution. To clarify or correct the record, the complex in claim 1 is a solid when present in an aqueous medium. Other components of the overall microbicidal composition, such as the disinfectant, can be a liquid or other form. Furthermore, claim 28 illustrates a DSC spectrum,

which is used for solids and not liquids. Accordingly, the rejection under 35 U.S.C. §112, second paragraph, should be withdrawn.

At page 4 of the Office Action, the Examiner rejects claims 1-4, 8, 11, 13, 16, 18, 21, and 22 under 35 U.S.C. §102(b) as being anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Poddymov et al. or Sanchez et al. for the reasons set forth in the prior Office Actions.

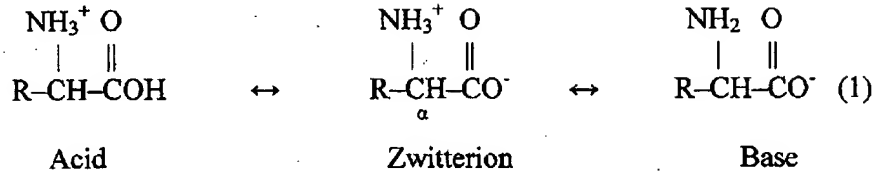
Additionally, the Examiner asserts that Poddymov et al. and Sanchez et al. each teach a method of chelating silver with amino acids in acidic conditions at room temperature. Alternatively, the Examiner asserts that the claimed invention is rendered obvious within the meaning of 35 U.S.C. §103(a), because the cited art describes products and uses that contain the same exact ingredients/components as that of the claimed invention.

Furthermore, in response to the applicants' argument submitted on April 14, 2003 that neither Poddymov et al. nor Sanchez et al. teach or suggest the use of the complexes as bactericides, the Examiner asserts that recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. According to the Examiner, if the prior art structure is capable of performing the intended use of the claimed invention, then the prior art anticipates the claimed invention. Thus, according to the Examiner, the intended use of a claim drawn to a process of making a product must result in a manipulative difference when compared to the prior art. The Examiner also asserts that no requirement exists that a reference provide structural spectra. With respect to the applicants' argument that pages 14 and 15 of the present

application state that the product of the claimed invention is in a solid state, the Examiner asserts that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. Further, the Examiner states that claims 2, 10, 13-15, 20, 23-27, and 30 recite that the product is in an aqueous solution or imply that the product is a liquid or a semi-liquid. Also, the Examiner asserts that Poddymov et al. describes that complexes are formed at a pH of less than 3. Finally, the Examiner asserts that the applicants provide no evidence that a pH of about 2 excludes a pH of 3 or less. For the following reasons, this rejection is respectfully traversed.

Poddymov et al. relates to the reaction of Ag with gelatin to form amino acids by hydrolysis to determine the factors affecting photographic properties of light-sensitive materials based on gelatin and silver halides. Thus, Poddymov et al. does not relate to antimicrobial agents and one skilled in the art would not look to Poddymov et al. under 35 U.S.C. §103. Furthermore, unlike the claimed invention, the material of Poddymov et al. does not form a solid, but instead forms a soluble complex when present in an aqueous solution. Additionally, a complex formulation can be observed in glycine and aspartic acid solutions at a pH of greater than 6.5. The complex formulation increases with increasing the pH of the solution. Additionally, according to Poddymov et al. in the methionine solution, complexation decreases significantly below a pH of 3. Accordingly, in Poddymov et al., the complex formulation in methionine was measured at a pH of 4. In contrast, as recited in claims 1, 13, 16, and 21 of the present application, precipitation complexation occurs at a pH of 2 or less. Also, no "at least one disinfectant" is taught or suggested.

The behavior of the composition of Poddymov et al. can be explained as follows:



In the above formula, the amino acid exists as a zwitterion, that is, it acts as a base and as an acid. In an acidic solution, the α-carbon becomes protonated, which prevents any complexing to occur by preventing the OH group of the carboxylic acid to form a bond. Therefore, the glycine and aspartic acid only form complexes in basic solutions at a pH greater than 6.5, where the carboxylic group acts as a Lewis-acid and can form a complex with a metal. Similarly, the concept described above also holds for methionine. Therefore, it would be clear to one skilled in the art that complexation in Poddymov et al. occurs with the carboxylic acid group, unlike in the claimed invention. Thus, the structure of Poddymov et al. differs from the structure of the claimed invention. With respect to Examiner's statement that Poddymov et al. teaches that complexes are formed at a pH of less than 3, page 879, column 1, lines 1-6 of Poddymov et al. states that for methionine, complexation decreases significantly below a pH of 3. A person skilled in the art, reading this point, would not go below a pH of 3. Thus, Poddymov et al. teaches away from the claimed invention.

In addition, with respect to the Examiner's argument that the recitation of the intended use of the claimed invention would not distinguish over the prior art, this is not entirely accurate with respect to several of the claims in the present application. First, claim 1 recites at least one disinfectant. The Examiner's attention is also respectfully pointed to claim 9 which specifically relates to a method to control the growth of microorganisms. This claim is more than an "intended

use," it is a method claim which is directed to controlling the growth of microorganisms. This is clearly not taught or suggested by Poddymov et al. Furthermore, the Examiner has not given any patentable weight to this method claim but has only concentrated on the product claims like claim 1. Clearly, claim 9 and the other method claims which relate to controlling biofouling and the like are clearly not taught or suggested in Poddymov et al.

Sanchez et al. relates to determining the thermodynamic stability constants of Ag with phenylalanine, alanine, and serine. According to page 33, paragraph 4, lines 1-7 of Sanchez et al., protons are liberated when a metal ion replaces hydrogen ions in the ligand. However, if very stable complexes are formed, the replacement of protons will be complete so that pH measurements cannot yield accurate values of stability constants. In view of Sanchez et al., page 33, paragraph 4, lines 1-7, the complexes in Sanchez et al. differ from the claimed invention because the proton in Sanchez et al. is replaced by a metal. Furthermore, no suggestion exists in Sanchez et al. for its complexes to be used as bactericides or pesticides for plants, flowers, or biofouling. Sanchez et al. also does not teach or suggest at least disinfectant, as recited, for instance, in claim 1. As stated above, the Examiner must give patentable weight to the method claims, with respect to this difference. Accordingly, the rejection under 35 U.S.C. §102(b) or, alternatively, under 35 U.S.C. §103(a) should be withdrawn.

CONCLUSION

In view of the foregoing remarks, the applicants respectfully request the reconsideration of this application and the timely allowance of the pending claims.

If there are any other fees due in connection with the filing of this response, please charge the fees to Deposit Account No. 50-0925. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such extension is requested and should also be charged to said Deposit Account.

Respectfully submitted,

Luke A. Kilyk
Reg. No. 33,251

Atty. Docket No. 3731-002
KILYK & BOWERSOX, P.L.L.C.
53 A East Lee Street
Warrenton, VA 20186
Tel.: (540) 428-1701
Fax: (540) 428-1720

Application No. 09/761,561
Amendment Dated October 1, 2003
Reply to Final Office Action of July 2, 2003
Replacement Sheet

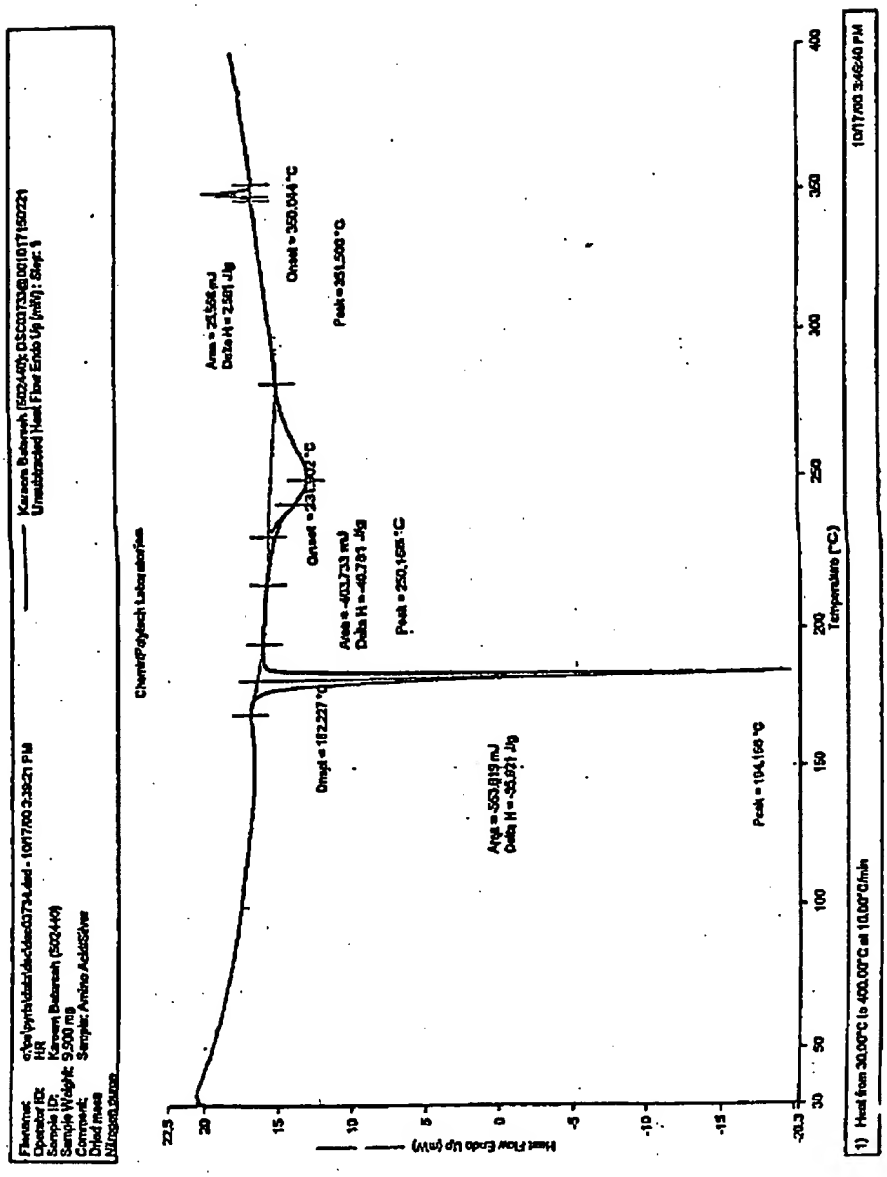


Figure 1. DSC Spectrum

Application No. 09/761,561
Amendment Dated October 1, 2003
Reply to Final Office Action of July 2, 2003
Replacement Sheet

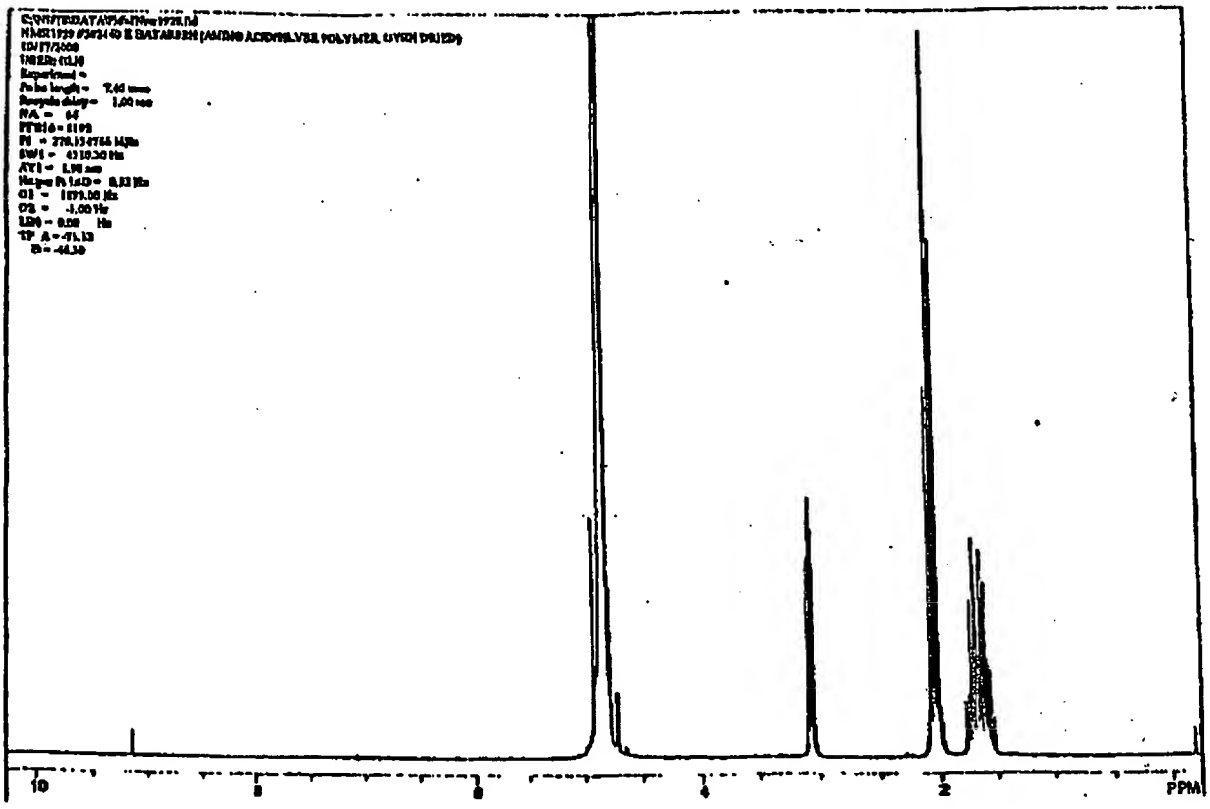


Figure 2. Proton NMR Spectrum

Application No. 09/761,561
Amendment Dated October 1, 2003
Reply to Final Office Action of July 2, 2003
Replacement Sheet

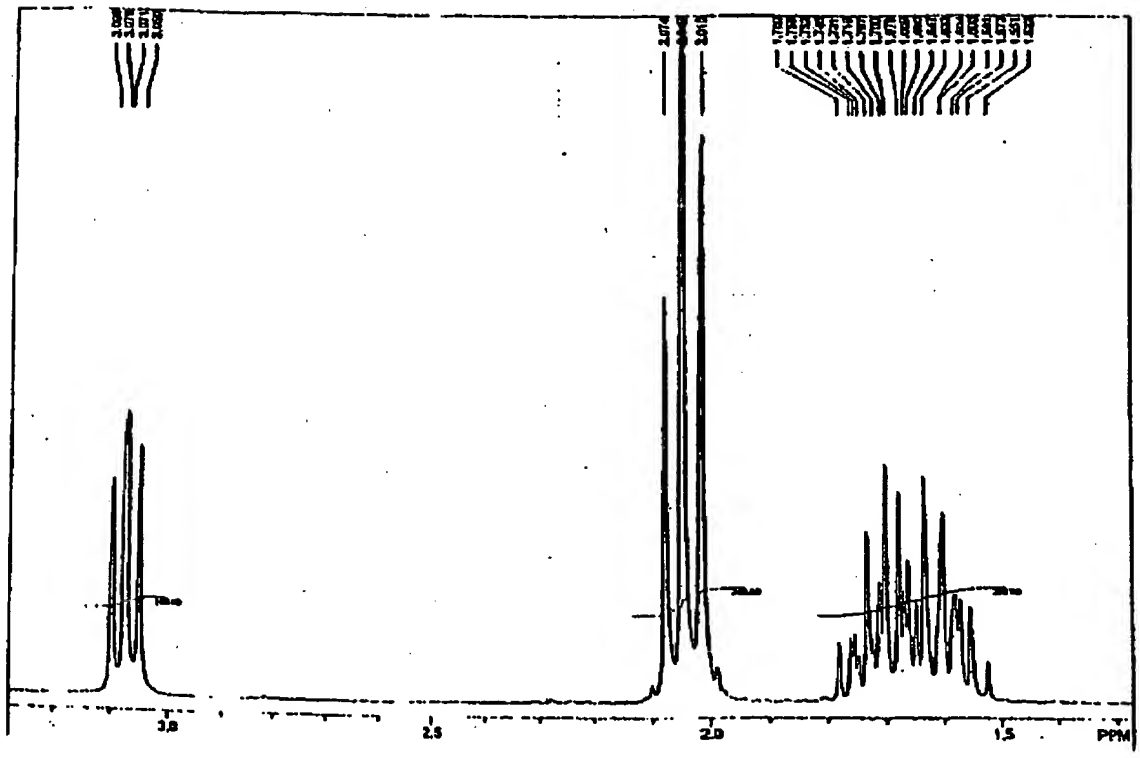


Figure 2. Proton NMR Spectrum – Cont.

Application No. 09/761,561
Amendment Dated October 1, 2003
Reply to Final Office Action of July 2, 2003
Replacement Sheet

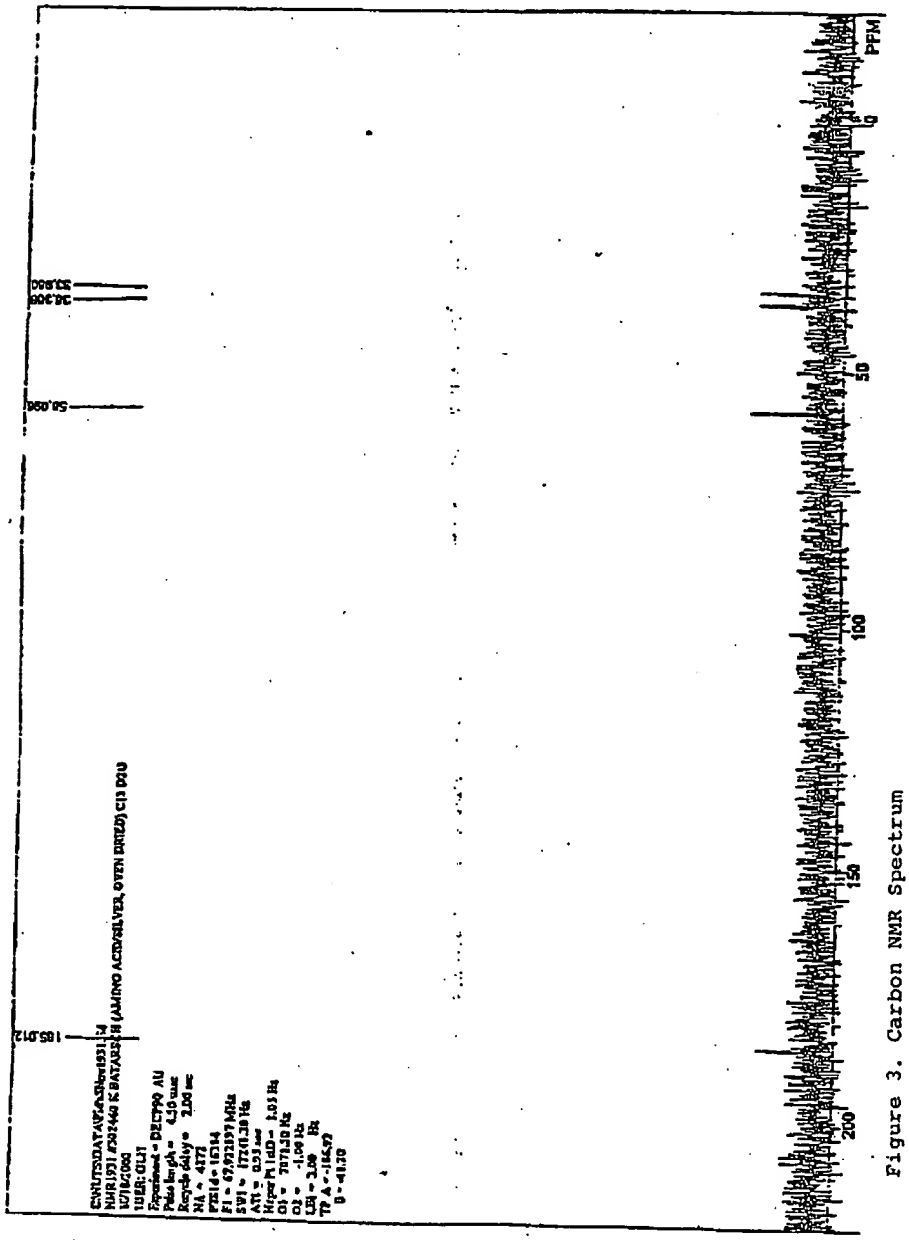


Figure 3. Carbon NMR Spectrum

Application No. 09/761,561
Amendment Dated October 1, 2003
Reply to Final Office Action of July 2, 2003
Annotated Sheet Showing Changes

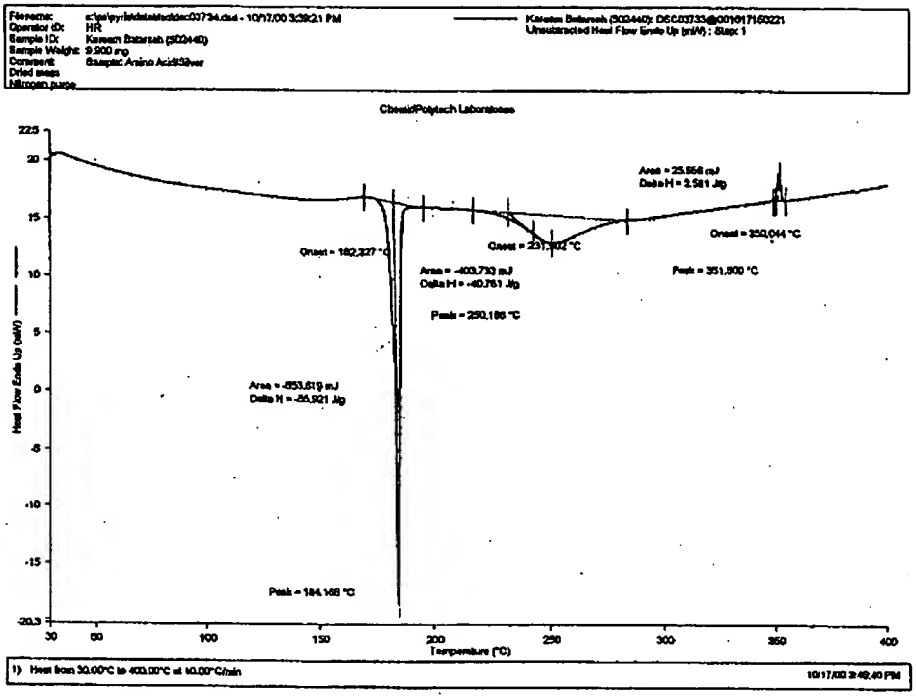


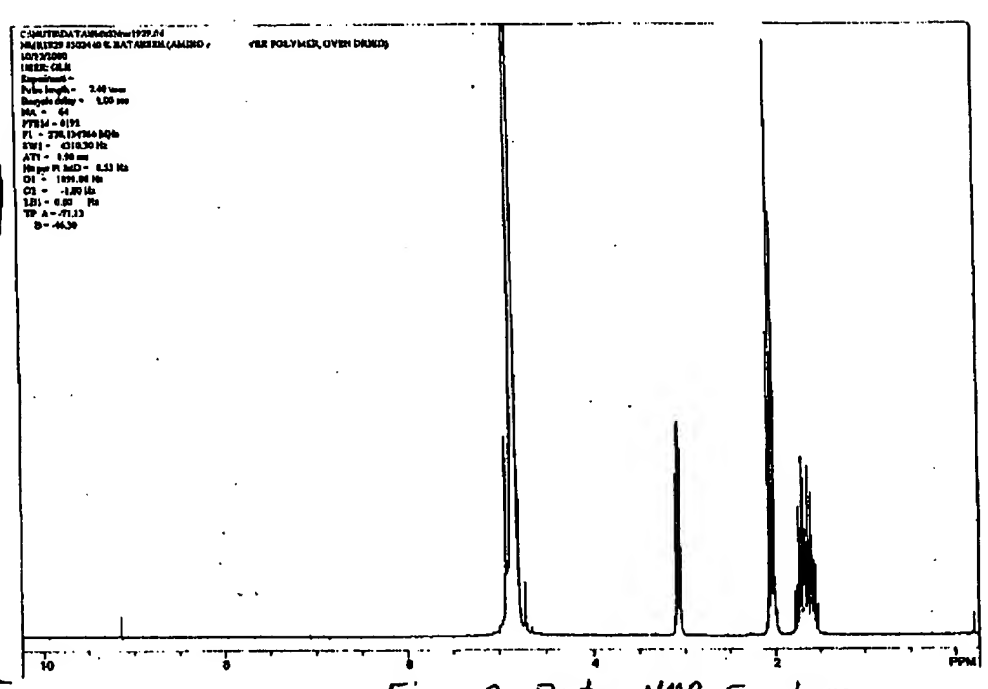
Figure rotated 90° in direction of the arrow and enlarged

Figure 1. DSC Spectrum

period deleted

Application No. 09/761,561
Amendment Dated October 1, 2003
Reply to Final Office Action of July 2, 2003
Annotated Sheet Showing Changes

figure placed on a separate sheet and enlarged



Title added

Figure 2. Proton NMR Spectrum

figure placed on a separate sheet and enlarged

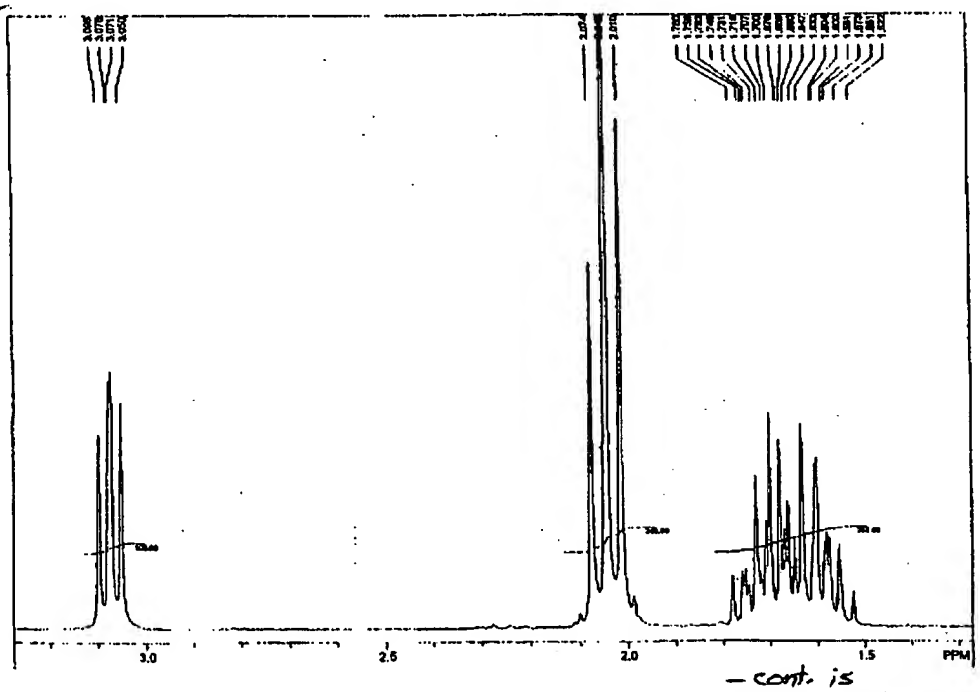


Figure 2. Proton NMR Spectrum — cont. is added to the title

period deleted

Application No. 09/761,561
Amendment Dated October 1, 2003
Reply to Final Office Action of July 2, 2003
Annotated Sheet Showing Changes

Figure rotated 90° in the direction of the arrow and enlarged

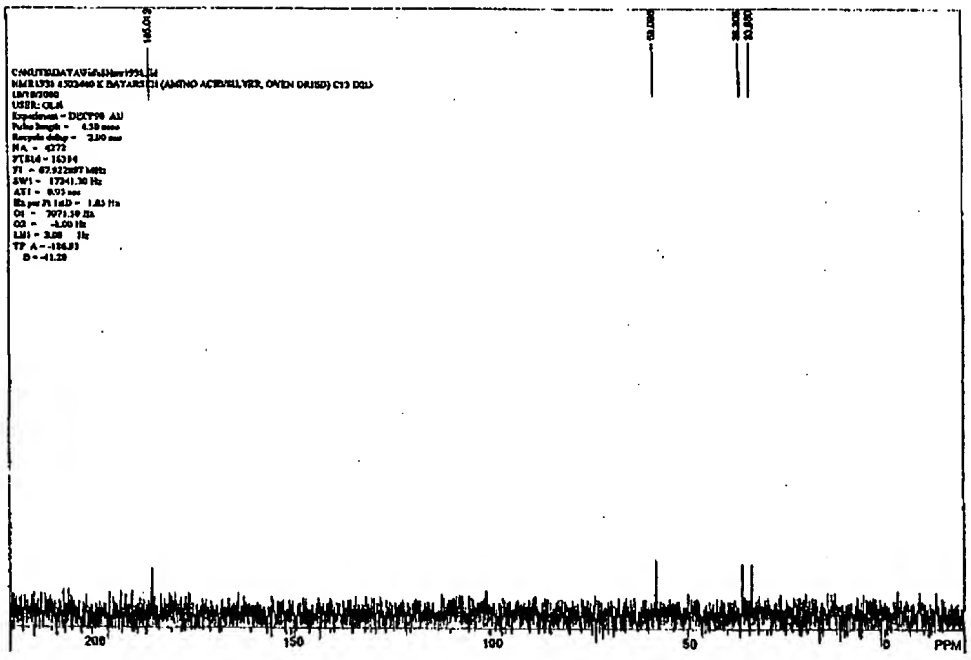


Figure 3. Carbon NMR Spectrum

period deleted